Group 8.

Assignment 4 EE312 (Semester 2/2019)

1. Due March 1st, 2020 (before 11.30 pm. Submit your work on the BE Moodle.)
2. For question 1 and question 3, even-numbered groups are assigned to do even-numbered sub questions.
3. For question 2, you must attempt all.

Question 1: Use the demand and supply model. Predict the directional change of the exchange rate (baht/USD) under the following situations.

1.1 The bank of Thailand cuts its policy rate.

1.2 Market expects that US dollar will be appreciating in the future.

1.3 The US government has imposed a trade sanction on Thai's agricultural product exported to the US market.

1.4 A positive improvement in production technology of Thailand causes a decrease in domestic price.

Question 2 Suppose that S&P, an international credit-rating agency, has decided to *downgrade* the credit rating of Thai economy. Answer the following problems.

a) Under the flexible exchange rate, how does the ~~upgrade~~ downgrade of credit rating affect the value of Thai currency?

b) If the authority wishes to resist the movement of the exchange rate (baht/USD), what does the authority need to do? Explain about the implementation process under the forex market intervention.

c) Discuss about the unintended impact of the forex market intervention on the domestic financial system. If the authority wishes to limit the sided effect of the forex market intervention, what does the authority need to do?

Question 3 Under the Mundell-Fleming model, analyze the impact of the following situations on output, real interest rate, exchanger rate, unemployment rate. Analyze the impact under both fixed and flexible exchange rate system

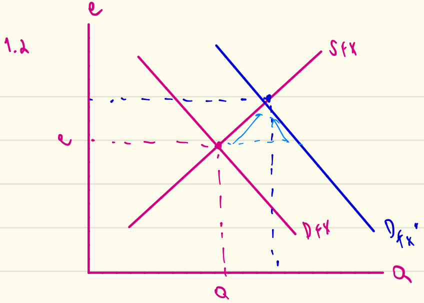
3.1) A reduction of money supply.

3.2) An increase in government spending.

3.3) Thai government has imposed a tariff on imported products.

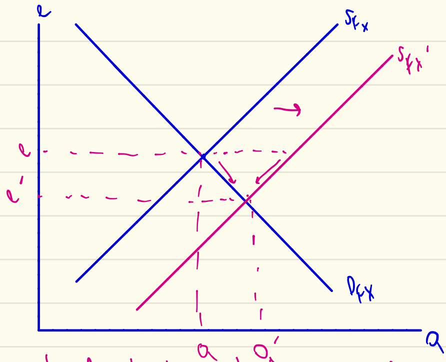
3.4) Thai's credit rating condition has been improved.

1.2



If market expected that \$ will be appreciate in future, people will demanded more for holding US currency. As a result, Dfx will shift rightward to Dfx'. Then macroeconomy will face with excess demand which people want to hold more money in term of \$ exceed the supply for US \$. Hence, economy will adjusted by increasing e (exchange rate) to clear excess demand which when e higher, in supply sides foreigner will supply more US \$ because THB depreciation which means that they can buy products in Thailand cheaper. In demand curve, Thai people will demand less for foreigner goods because it will expensive compared to Thai products.

1.4)



Since technological advancement play a role for decreasing domestic price, foreigners will want to convert US \$ to THB for purchasing product in Thailand because price in Thailand is relative cheaper to US. Hence, Sfx shift rightward to S'fx which economy will face with excess supply. Then to clear this problem exchange rate must be adjusted to be lower at e'. In demand sides, when e drop people will demand more US hence, quantity demanded will partially increase to reach Q', and in supply side since \$ depreciation, people will want to sell \$ hence, quantity supply will partially drop to reach Q'.

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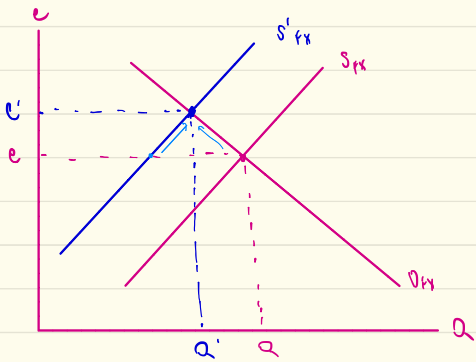
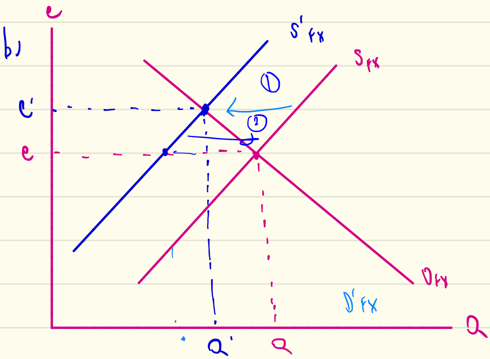
a)



If S&P, an international credit-rating agency, decide to downgrade credit rating of Thai currency, it will causes Thai credibility to invest drop. Hence, foreigners will hesitate for exchanging US currency to be THB which imply that supply curve will shift leftward. From this event, market will face with excess demand hence, to clear with excess demand exchange rate must be adjusted for higher level. Concerning to supply curve, when exchange rate increases foreigners will supply US$ because Thai products are relative cheaper for their products. However, in demand for Forex curve domestic people will demand less for holding US $ because in term of expensiveness. when THB depreciation, foreign goods will be more expensive.

b)



If economy face with situation that S&P downgrade credit rating of Thai economy, market will face with foreigns decision to decelerate the investment in Thai market which causes supply for Forex shift leftward from S_{FX} to S'_{FX}. As a result, exchange rate will rise from e to e' which represent Baht depreciation. In order to tackle with this issue, central bank must supply their forex reserve because this event market faced with excess demand. Since this practice is already took place, supply for forex will shift back to equilibrium point. As a result, Central bank can fixed exchange rate at e.

c) Unintended problems are that when central bank sold forex reserve, forex currency reserve in Thailand will drop. Moreover, monetary base including currency in circulations and commercial bank reserve also drop. As a result, economy face with increasing in interest rate. In order to tackle with this problem central bank can simply induce people to buy government bond.

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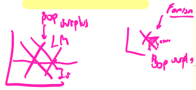
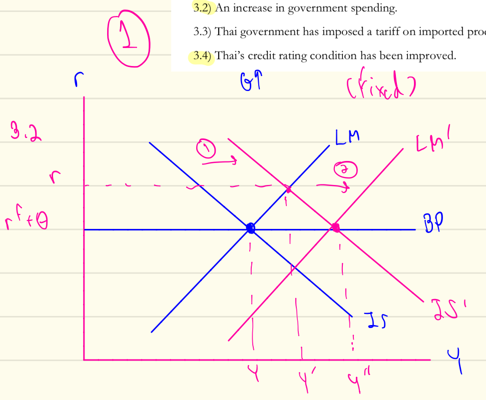
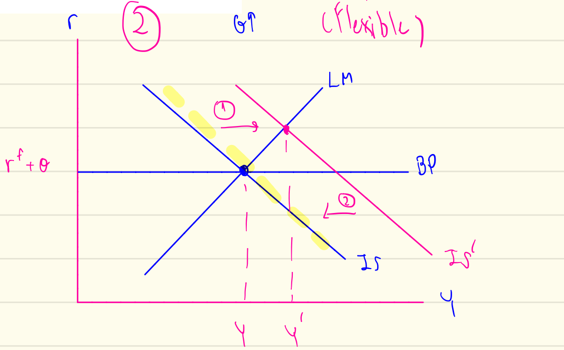


X appre ← export less

BOP>0 → appre





Considering the situation that government increases an government spending, this event causes IS curve to shift rightward from IS to IS'. Then market will have higher interest rate and higher outputs because when government spending increase, aggregate expenditure also rises as a result, outputs or real GDP increased from Y to Y' in both graph (①, ②). Moreover when we consider both graph, market interest rate (r) is already exceed foreign interest rate at $r^f+\theta$. From this event, market expereince with BOP surplus. As a result market have to be adjusted by two regimes which are fixed exchange rate and flexible exchange rate. Considering to fixed exchange rate in graph ①, when IS shift rightward from IS to IS' economy face with BOP surplus which it represents excess supply for US currency. In order to tackle with this problem under fixed exchange rate regime, central bank will buy this amount of excess supply, and keep it in forex reserve. As a result, it will cause money supply increase, and also raise liquidity in Thai economy. Hence, LM curve will shift rightward to LM' which market is already suceesful to hold exchange rate at initial level. However, when money supply increase further it may lead to inflation event which lower unemployment rate. In another case which is flexible exchange rate approach, this process is that market will adjust itself. Firstly, when BOP surplus occured foreigners will want to convert US currency to Thai currency. As a result, it causes baht appreciation which will further lead to decline in export because Thai product are now relatively expensive than another country. Hence, IS' shift back to IS which outputs (Y') drop to (Y), and exchange rate also adjust to initial level.

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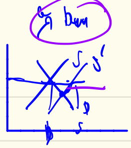


r↑ → invest thai ↑

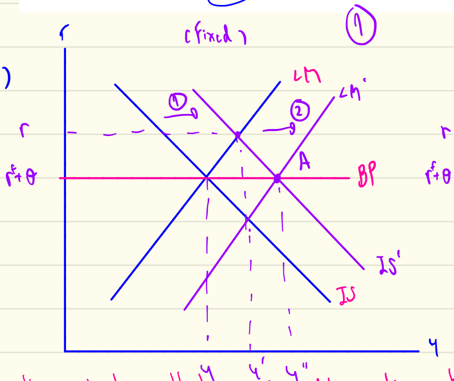
↓

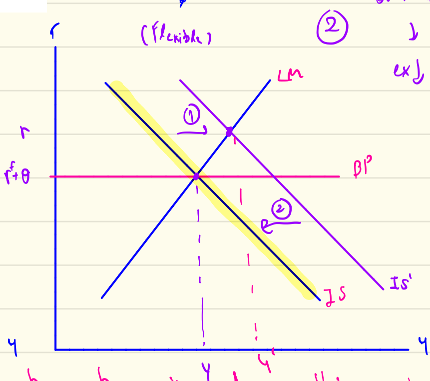
baht appr

↓

ex ↓

3.4)





Considering the situation that Thai's credit rating has been improved, this event causes IS curve to shift rightward from IS to IS'. Then market will have higher interest rate and higher outputs because when Thai market is more safety, Investment will rise, and aggregate expenditure also increases as a result, outputs or real GDP increased from y to y' in both graph (①,②). Moreover when we consider both graph, market interest rate (r) is already exceed foreign interest rate at $r^f+\theta$. from this event, market experience with BOP surplus. As a result market have to be adjusted by two regimes which are fixed exchange rate and flexible exchange rate. Considering to fixed exchange rate in graph ①, when IS shift rightward from IS to IS' economy face with BOP surplus which it represents excess supply for US currency. In order to tackle with this problem under fixed exchange rate regime, central bank will buy this amount of excess supply, and keep it in forex reserve. As a result, it will causes money supply increase, and also raise liquidity in Thai economy. Hence, LM curve will shift rightward to LM' which market is already succesful to hold exchange rate at initial level. However, when money supply increase further it may lead to inflation event which lower unemployment rate. In another case which is flexible exchange rate approach, this process is that market will adjust itself. Firstly, when BOP surplus occured foreigners will want to convert US currency to Thai currency. As a result, it causes baht appreciation which will further lead to decline in export because Thai product are now relatively expensive than another country. Hence, IS' shift back to IS which outputs (y') drop to (y), and exchange rate also adjust to initial level.